REMARKS

This Amendment and Response is filed in response to the Office Action mailed on April 14, 2010. Please consider the above-identified patent application in view of the amendments and remarks provided herein.

Claims 1, 15, 22, and 29 are amended herein, no claims are canceled, and no claims are newly added; as a result, claims 1, 3-7, 15, 17-22, and 24-34 are pending in this application.

§103 Rejections of the Claims

Claims 1, 3, 5, 7, 15, 17, 19, 21-22, 24, 26, 28-30, 32, and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lehman, et al. (U.S. 4,796,179, hereinafter, "Lehman") in view of Gauthier et al., "Automatic Generation and Targeting of Application Specific Operating Systems and Embedded Systems Software", 2001, IEEE (hereinafter 'Gauthier'), and further in view of Liu et al., 'Timed Multitasking for Real-Time Embedded Software', Feb. 2003, IEEE (hereinafter, 'Liu'), and further in view of Kuljeet Singh *'Design and Evaluation* of *an Embedded Real-time Micro-kernel',* October 2002, pp. 1-133, Virginia Polytechnic Institute and State University (hereinafter 'Singh').

Claims 4, 18, 25, and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lehman, in view of Gauthier, Liu, Singh, and further in view of Xu et al., "On Satisfying Timing Constraints in Hard-Real-Time Systems", 1991, ACM (hereinafter 'Xu').

Claims 6, 20, 27, and 33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lehman, in view of Gauthier, Liu, Singh, Xu, further in view of D. Lake (US 2004/0045003A1) (hereinafter 'Lake').

Applicant respectfully submits that the Office Action did not make out a *prima facie* case of obviousness, because several of the cited references should be withdrawn from consideration as not proper prior art, and even if combined, the properly cited references fail to teach or suggest all of the claim elements of the pending claims of the present application.

Cited References Gauthier, Liu, Singh, and Lake Should be Withdrawn as Not Being Prior Art

As admitted in the Office Action at page 3, the priority claim made in the present application properly established the present application is a continuation-in-part drawing priority to U.S. Patent No. 6,934,947 (herein the '947 patent). As such, the present application is entitled to the benefit of the priority date of the '947 patent as to the presently claimed subject matter disclosed in the '947 patent. As demonstrated below, all elements of amended claims 1, 15, 22, and 29 are fully described and enabled by the disclosure in the '947 patent. Therefore, amended claims 1, 15, 22, and 29 are entitled to the benefit of the priority date of the '947 patent. For this reason, the Gauthier, Liu, Singh, and Lake references are not prior art and should therefore be withdrawn.

For the purpose of explanation, consider each of the elements of amended claim 1 as presented below. Claims 15, 22, and 29 include similar elements. The first element of amended claim 1 is set forth below:

> specifying a set of n tasks, task(1) through task(n), to be scheduled for execution;

This element is taught in the '947 patent as the sample passage from the '947 patent at col. 1, lines 22-39 demonstrates:

> FIG. 1 is a block diagram of a real time operating system 100. As shown in FIG. 1, RTOS 100 includes kernel 101 which controls the scheduling of a number of tasks 102-106 through interfaces 107-111, respectively. An example of a task is an interrupt service routine for handling an interrupt from a peripheral hardware device. Interfaces 107-111 are each a small program section of the task which communicates with "hooks" in kernel 101. Naturally, interfaces 107-111 conform to the interface requirements of RTOS 100. Kernel 101 allocates time slices and assigns a priority to each task, and activates or deactivates a task through the associated interface according to the time slices and the priority assigned. For example, kernel 101 ensures that an interrupt service task begins execution within a predetermined maximum latency from an interrupt. Kernel 101 is also responsible for such "house-keeping" tasks as garbage collection and prevention of deadlocks (i.e., two or more tasks waiting for each other to complete executing, resulting in none of the tasks being able to proceed).

The second element of amended claim 1 is set forth below:

> specifying t init-tasks that are executed only once upon initial execution of a task scheduler, t being less than or equal to n;

The '947 patent, as a priority document for the present application, provides

support for this claim element. For example, see the '947 patent at col. 3, lines 24-31. This portion of the priority patent is set forth below:

> As shown in FIG. 3, VIRTOS queries the user to provide (a) a task name (301), and (b) a subroutine type (302). In this embodiment, four subroutine types are supported: (a) COMMON subroutine, (b) INIT task; (c) LOOP task and (d) ISR task. A COMMON subroutine performs a specified function, and can be called from the other subroutines or tasks. An INIT task is a subroutine which is called once by the task management code to initialize a LOOP task or an ISR task. ('947 patent, col. 3, lines 24-31)

This portion of the '947 patent, inter alia, fully supports and enables the claim element listed above. This element is also absent from Lehman as admitted in the current Office Action and in prior Office Actions.

The third element of amended claim 1 is set forth below:

> using a data processor to synthesize source code from commands embedded in source code to implement the task scheduler for controlling execution of said set of n tasks, the task scheduler further controlling one execution of each of said set of t init-tasks, said synthesized source code being executable on a target system after compilation; and

The '947 patent, as a priority document for the present application, provides support for this claim element. For example, see the '947 patent at col. 4, lines 26-49. This portion of the priority patent is set forth below:

> FIG. 5 shows dialog box 500 of the graphical user interface. As shown in FIG. 5, in section 501 of dialog box 500, the user is queried to provide a list of tasks to be included by the code synthesizer to create synthesized code of the polling loop that can be compiled. At section 502 of dialog box 500, the user is queried to provide a list of files to be included by the code synthesizer to create synthesized code of the polling loop that can be compiled. At section 503, the user is queried for directives to a compiler that are necessary to configure the compiler to create the executable code from the synthesized code. Respectively, at sections 504-507, the user is queried to provide identifying and descriptive information to be included in a comment header of the synthesized code: (a) a project name; (b) the author's name; (c) some comments to be included; and (d) any other descriptive information. Upon completing dialog box 500 (i.e., after the user provides the requested information and selects the "OK" button 508), the synthesized code is created by (a) creating a main polling loop that manages the tasks, and (b) replacing all of the VIRTOS commands by actual code that would execute the intended function of the replaced VIRTOS commands. If the user selects "CANCEL" button 509, the operation is aborted, and no directive would be generated for code synthesis. ('947 patent, col. 4, lines 26-49)

Also, see the '947 patent at col. 3, lines 24-31 as set forth above. These portions of the '947 patent, inter alia, fully support and enable the claim element set forth above as

included in the pending claims. This element is also absent from Lehman as admitted in the current Office Action and in prior Office Actions.

The fourth element of amended claim 1 is set forth below:

> synthesizing source code from commands embedded in source code to control execution of said set of t init-tasks.

The '947 patent, as a priority document for the present application, provides support for this claim element. For example, see the '947 patent at col. 3, lines 24-31 and col. 4, lines 26-49 as set forth above. These portions of the '947 patent, inter alia, fully support and enable the claim element set forth above as included in the pending claims. This element is also absent from Lehman as admitted in the current Office Action and in prior Office Actions.

Therefore, as detailed above, all elements of amended claim 1 are fully described and enabled by the disclosure in the '947 patent. Claims 15, 22, and 29 include similar elements also fully described and enabled by the disclosure in the '947 patent. Therefore, amended claims 1, 15, 22, and 29 are entitled to the benefit of the priority date of the '947 patent. The Gauthier, Liu, Singh, and Lake references each post-date the priority date of the '947 patent. For this reason, the Applicant respectfully submits that the Gauthier, Liu, Singh, and Lake references are not prior art and should therefore be withdrawn from further consideration in this application.

The current Office Action and prior Office Actions admit that Lehman does not disclose most of the elements of amended claims 1, 15, 22, and 29. For example, see the current Office Action at pages 5, 7, 8, 12-14, 17, 20, 23, 25, 26. In each case, the claim rejections are based largely on the disclosures from the references that post-date the priority date to which the presently presented claims are entitled. For example, the Office Action admits that the following elements of claim 1 are not taught by Lehman (e.g., see the Office Action, pgs. 5 and 7):

> specifying t init-tasks that are executed only once upon initial execution of a task scheduler, t being less than or equal to n;
> using a data processor to synthesize source code from commands embedded in source code to implement the task scheduler for

controlling execution of said set of n tasks, the task scheduler further controlling one execution of each of said set of t init-tasks, said synthesized source code being executable on a target system after compilation; and

synthesizing source code from commands embedded in source code to control execution of said set of t init-tasks.

Claims 15, 22, and 29 also include similar elements not taught or suggested by Lehman. As such, claims 1, 15, 22, and 29, and claims dependent thereon, are patentable over Lehman.

The Office Action rejected claims 4, 18, 25, and 31 in part in view of Xu. The Office Action offered Xu as allegedly disclosing a means for specifying p-loop tasks. However, Xu does not disclose or suggest the elements missing from Lehman as explained above. Therefore, Xu in combination with Lehman does not render the pending claims unpatentable.

The Applicant respectfully submits that the properly cited references do not render obvious the claims as presented. Therefore, the Applicant respectfully requests withdrawal of the §103(a) rejections.

The Applicant respectfully submits that for at least the reasons set forth above and previously submitted, the pending claims are patentable over the properly applied art of record. The Applicant respectfully requests withdrawal of the outstanding claim rejections and allowance of the pending claims.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Jim H. Salter at 408-406-4855 to facilitate prosecution of this application.

Respectfully submitted,

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Date June 11, 2010 By _____
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Attention: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 11th day of June, 2010.

Jim H. Salter _____

Name Signature